

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Peripheral Equipment**with type designation(s)
u-remote I/O-System

Issued to

Weidmüller Interface GmbH & Co. KG
Detmold, Germany

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:**

Temperature	D
Humidity	B
Vibration	B
EMC	B
Enclosure	A

Issued at **Hamburg** on **2020-08-27**for **DNV GL**This Certificate is valid until **2022-05-11**.DNV GL local station: **Magdeburg**Approval Engineer: **Dariusz Lesniewski**

Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

The modular u-remote systems supports common fieldbus systems and conforms to IEC 61131-2. Up to 64 active I/O modules can be combined in a u-remote station. The following components belong to the u-remote product series:

- Fieldbus coupler (gateway)
- Active I/O modules
- Passive I/O modules
- Functional safety modules
- Mechanical fixing elements (end bracket, end plate)

Fieldbus coupler

Part name	Compass Safe Distance acc. to IEC 60945		Hardware version
	Standard compass	Steering compass	
UR20-FBC-PL	0.3 m	0.3 m	01.03.xx
UR20-FBC-CAN	0.3 m	0.3 m	01.01.xx
UR20-FBC-PN-IRT	0.3 m	0.3 m	01.07.xx
UR20-FBC-PN-IRT-V2	0.3 m	0.3 m	01.08.xx
UR20-FBC-MOD-TCP-V2	0.3 m	0.3 m	01.03.xx
UR20-FBC-EIP	0.3 m	0.3 m	02.02.xx
UR20-FBC-EC	0.3 m	0.3 m	02.02.xx
UR20-FBC-PB-DP	0.3 m	0.3 m	01.13.xx

AUX-Module

UR20-16AUX-I	0.3 m	0.3 m	01.02.xx
UR20-16AUX-O	0.3 m	0.3 m	01.01.xx
UR20-16AUX-FE	0.3 m	0.3 m	01.02.xx
UR20-16AUX-GND-I	0.3 m	0.3 m	01.02.xx
UR20-16AUX-GND-O	0.3 m	0.3 m	01.02.xx

Digital Input

UR20-2DI-P-TS	---	---	01.01.xx
UR20-4DI-P	0.3 m	0.3 m	01.10.xx
UR20-4DI-P-3W	---	---	01.00.xx
UR20-4DI-P-TS	0.3 m	0.3 m	01.01.xx
UR20-8DI-P-2W	0.3 m	0.3 m	01.01.xx
UR20-8DI-P-3W	0.3 m	0.3 m	01.31.xx
UR20-8DI-P-3W-HD	---	---	01.00.xx
UR20-16DI-P	0.3 m	0.3 m	01.01.xx
UR20-16DI-P-PLC-INT	0.3 m	0.3 m	01.02.xx
UR20-4DI-N	0.3 m	0.3 m	01.10.xx
UR20-8DI-N-3W	0.3 m	0.3 m	01.30.xx
UR20-16DI-N	0.3 m	0.3 m	01.01.xx
UR20-16DI-N-PLC-INT	0.3 m	0.3 m	01.11.xx

Digital Output

UR20-4DO-P	0.3 m	0.3 m	01.20.xx
UR20-4DO-P-2A	0.3 m	0.3 m	01.11.xx
UR20-8DO-P	0.3 m	0.3 m	01.01.xx
UR20-16DO-P	0.3 m	0.3 m	01.03.xx
UR20-8DO-P-2W-HD	---	---	01.00.xx

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UR20-16DO-P-PLC-INT	0.3 m	0.3 m	01.13.xx
UR20-4DO-N	0.3 m	0.3 m	01.00.xx
UR20-4DO-N-2A	0.3 m	0.3 m	01.00.xx
UR20-8DO-N	0.3 m	0.3 m	01.00.xx
UR20-16DO-N	0.3 m	0.3 m	01.10.xx
UR20-16DO-N-PLC-INT	0.3 m	0.3 m	01.01.xx
UR20-4DO-PN-2A	0.3 m	0.3 m	01.02.xx

230V

UR20-4RO-SSR-255	0.3 m	0.3 m	01.10.xx
UR20-4RO-CO-255	0.3 m	0.3 m	01.03.xx
UR20-4DI-2W-230V-AC	0.3 m	0.3 m	01.10.xx
UR20-3EM-230V-AC	0.3 m	0.3 m	01.40.xx

Analog Input

UR20-4AI-UI-12	0.3 m	0.3 m	01.30.xx
UR20-4AI-UI-16	0.3 m	0.3 m	01.30.xx
UR20-4AI-UI-16-DIAG	0.3 m	0.3 m	01.30.xx
UR20-4AI-UI-DIF-16-DIAG	0.3 m	0.3 m	01.21.xx
UR20-4AI-RTD-DIAG	0.3 m	0.3 m	01.02.xx
UR20-4AI-TC-DIAG	0.3 m	0.3 m	01.02.xx
UR20-2AI-SG-24-DIAG	0.3 m	0.3 m	01.02.xx

Analog Output

UR20-4AO-UI-16-M	0.3 m	0.3 m	01.00.xx
UR20-4AO-UI-16-M-DIAG	0.3 m	0.3 m	01.00.xx

Power-Feed

UR20-PF-I	0.3 m	0.3 m	01.01.xx
UR20-PF-O	0.3 m	0.3 m	01.01.xx

Counter

UR20-2FCNT-100	0.3 m	0.3 m	00.90.xx
UR20-2CNT-100	0.3 m	0.3 m	00.90.xx
UR20-1CNT-100-1DO	0.3 m	0.3 m	00.91.xx
UR20-1CNT-500	0.3 m	0.3 m	01.00.xx

Communication module

UR20-1COM-232-422-485	0.3 m	0.3 m	01.06.xx
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Special functions

UR20-1SSI	0.3 m	0.3 m	01.00.xx
UR20-ES	0.3 m	0.3 m	01.00.xx

Flammability rating UL94: V0
 Type of connection: Push In

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Place of manufacture

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
32758 Detmold
Germany

Zollner Electronic AG
Untergschwandt 3
94371 Rattenberg
Germany

S C ZES Zollner Electronic SRL
Parc Industrial SUD NR FN
440247 Satu Mare
Romania

Approval Conditions

The Type Approval covers hardware listed under Product description.
When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL RU SHIP Pt.4 Ch.9 Sec. 1.

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Application/Limitation

Corrosion test (salt mist) was not carried out. Compliance with the IEC 60945 in this regard to be considered case-by-case.

Type Approval documentation

Laboratory test plan remote I/O-system UR20 "u-remote" (Index 1 / 31.08.2016)
Prüfaufbau DUT1_DUT2_Maritim_EMV (Revision 2 / 30.08.2016)
Prüfaufbau UR20 DUT3_DUT4 maritime Zulassungen ENV (05.12.2016)
Prüfaufbau UR20 DUT3_DUT4 maritime Zulassungen EMC (05.12.2016)
Prüfaufbau DUT5_DUT6 Project Template 2.4 ENV (28.03.2017)
Prüfaufbau DUT5_DUT6 Project Template 2.4 EMC (28.03.2017)
Protocol-Performance test DUT1&DUT2 LO16-00907 (19.09.2016)
Protocol-Performance test DUT5&DUT6 LO17-00364 (04.04.2017)
Protocol Conducted Emission test DUT5&DUT6 (04.04.2017)
Test report Weidmüller LAB20918E (28.03.2017)
Test report Weidmüller LAB20971E (28.03.2017)
Test report Weidmüller LAB20972E (28.03.2017)
Test report Weidmüller LAB18426 (02.12.2014)
Test report RS Schwarze no. 2016142a (10.11.2016)
Test report RS Schwarze no. 2016142b (14.11.2016)
Test report RS Schwarze no. 2016142c (14.11.2016)
Test report Weidmüller LAB21033E (09.05.2017)

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Test report Weidmüller LAB20841E (06.04.2017)
Test report RS Schwarze no. 2017013 (31.01.2017)
Test report Weidmüller LAB21232E (12.07.2017)
Test report Weidmüller LAB21221E (22.08.2017)
Test report Weidmüller LAB21222E (22.08.2017)
Test report RS Schwarze no. 2017074 (08.06.2017)
Test report Weidmüller LAB21507E (2018-02-14)
Test report Weidmüller LAB21546E (2018-02-09)
Test report RS Schwarze no. 2018010 (06.02.2018)
Test report ComDeC no. PN357-3 (2019-03-18)
Test report Weidmüller LAB22008E (2018-09-25)
Test report Weidmüller LAB22413E (2018-09-07)
Test report Weidmüller LAB22414E (2018-09-07)
Test report Weidmüller LAB22415E (2018-09-07)
Test report Weidmüller LAB22047E (2018-10-19)
Test report Weidmüller LAB22153E (2019-02-06)
Test report Weidmüller LAB22407E (2019-10-07)
Test report Weidmüller LAB22418E (2019-10-07)
Test report Weidmüller LAB22417E (2020-10-22)
Test report Weidmüller LAB22373E (2020-01-22)
BSH Certificate No. 969, dated 2017-09-28
Conducted Emission – Issue Analysis and Solution Document A388 (Revision 1.4 / 20.12.2016)
UR20 materials
Manufacturer's Declaration Document 11028449 "plastic materials" (30.03.2017)
Drawing no. 3 62325 (Issue 03 / 29.03.2016)
Drawing no. 3 62324 (Issue 02 / 29.03.2016)
Drawing no. 3 62323 (Issue 02 / 29.03.2016)
Drawing no. 3 62322 (Issue 03 / 29.03.2016)
Drawing no. 3 62321 (Issue 01 / 29.03.2016)
Drawing no. 3 62320 (Issue 01 / 29.03.2016)
Assembly Drawing no. 3 55011 (Issue 04 / 31.07.2017)
Assembly Drawing no. 3 54150 (Issue 06 / 28.07.2017)
Assembly Drawing no. 3 54207 (Issue 04 / 21.06.2017)
Assembly Drawing no. 3 55027 (Issue 01 / 09.01.2018)
Assembly Drawing no. 3 54212 (Issue 06 / 20.06.2017)
Assembly Drawing no. 3 54209 (Issue 04 / 14.07.2017)
Assembly Drawing no. 3 54158 (Issue 02 / 17.10.2017)
Assembly Drawing no. 3 55020 (Issue 06 / 28.06.2017)
Assembly Drawing no. 3 54227 (Issue 03 / 20.06.2017)
Assembly Drawing no. 3 54232 (Issue 04 / 21.06.2017)
Manual Remote-I/O-system u-remote (1432780000/10/10.2016)
Manual u-remote (1432790000/12/12.2017)
Quick reference UR20 fieldbus coupler (1484670000/07/11.2016)
Schematic UR20-FB-ZYN-ETHER_RSW_011100 (Drawing no. 3 61252, issue 2, 14.03.2016)
Schematic UR20-CTRL-Z010_PHY_012000 (Drawing no. 3 61003, issue 2, 26.03.2015)
Schematic UR20-PF-I_010100 (Drawing no. 3 60734, issue 0, 28.01.2015)
Schematic UR20-8DO-P_010100 (Drawing no. 3 60724, issue 0, 07.10.2014)
Schematic UR20-8DO-N_010000 (Drawing no. 3 60792, issue 1, 29.08.2014)
Schematic UR20-8DI-P-3W_013100 (Drawing no. 3 60732, issue 1, 16.12.2014)
Schematic UR20-4RO-SSR-255_011000 (Drawing no. 3 55818, issue 3, 30.09.2013)
Schematic UR20-4DI-P_010100 (Drawing no. 3 54496, issue 5, 27.06.2012)
Schematic UR20-4DI-P-TS_010100 (Drawing no. 3 57789, issue 0, 27.09.2013)
Schematic UR20-4AI-RTD-DIAG_010200 (Drawing no. 3 60751, issue 1, 10.10.2014)
Schematic UR20-16DO-N-PLC-INT_010100 (Drawing no. 3 60799, issue 2, 28.08.2015)
Schematic UR20-16DI-P_010100 (Drawing no. 3 55811, issue 4, 08.05.2012)
Schematic UR20-16AUX-I_010200 (Drawing no. 3 60755, issue 0, 03.12.2014)
Schematic UR20-FB-ZYN-CAN_010100 (Drawing no. 3 55837, issue 1, 17.12.2014)

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Schematic UR20-CTRL-Z010_010000 (Drawing no. 3 61003, issue 0, 26.03.2015)
Schematic UR20-PF-O_010100 (Drawing no. 3 60735, issue 0, 24.10.2014)
Schematic UR20-8DI-P-2W_010100 (Drawing no. 3 60731, issue 0, 21.01.2015)
Schematic UR20-8DI-N-3W_013000 (Drawing no. 3 60733, issue 0, 13.04.2015)
Schematic UR20-4RO-CO-255_010300 (Drawing no. 3 60737, issue 1, 09.03.2015)
Schematic UR20-4DO-PN-2A_010200 (Drawing no. 3 60766, issue 1, 11.05.2015)
Schematic UR20-4DO-P-2A_011100 (Drawing no. 3 60725, issue 0, 07.10.2014)
Schematic UR20-4DI-2W-230V-AC_011000 (Drawing no. 3 60077, issue 0, 21.05.2015)
Schematic UR20-4AI-TC-DIAG_010200 (Drawing no. 3 60719, issue 1, 10.10.2014)
Schematic UR20-16DO-P_010300 (Drawing no. 3 60752, issue 1, 29.04.2013)
Schematic UR20-16DI-N-PLC-INT_011100 (Drawing no. 3 60761, issue 1, 04.09.2015)
Schematic UR20-16AUX-GND-O_010200 (Drawing no. 3 60744, issue 0, 03.12.2014)
Schematic UR20 16AUX GND I (Drawing no. 3 60743, issue 0, 03.12.2014)
Schematic UR20 16AUX I (Drawing no. 3 60755, issue 0, 03.12.2014)
Schematic UR20 16DI N (Drawing no. 3 60728, issue 0, 23.03.2015)
Schematic UR20 16DI P PLCINT (Drawing no. 3 60722, issue 0, 02.07.2015)
Schematic UR20 1CNT 100 1DO P (Drawing no. 3 60729, issue 0, 07.01.2015)
Schematic UR20 2CNT 100 (Drawing no. 3 55845, issue 3, 06.06.2012)
Schematic UR20 4DI-N (Drawing no. 3 60754, issue 0, 18.03.2015)
Schematic UR20 4DO N (Drawing no. 3 60798, issue 1, 12.11.2014)
Schematic UR20 4DO P (Drawing no. 3 60723, issue 0, 07.10.2014)
Schematic UR20 ES (Drawing no. 3 56118, issue 2, 09.11.2012)
Schematic UR20 PF I (Drawing no. 3 60734, issue 0, 28.01.2015)
Schematic UR20 16AUX GND O (Drawing no. 3 60744, issue 0, 03.12.2014)
Schematic UR20 16AUX O (Drawing no. 3 55831, issue 3, 07.11.2012)
Schematic UR20 16DO N (Drawing no. 3 60800, issue 1, 02.02.2015)
Schematic UR20 16DO P PLCINT (Drawing no. 3 60753, issue 1, 17.12.2014)
Schematic UR20 1CNT 500 (Drawing no. 3 60738, issue 0, 27.05.2014)
Schematic UR20 2FCNT 100 (Drawing no. 3 59300, issue 2, 17.03.2014)
Schematic UR20 4DI N (Drawing no. 3 60754, issue 0, 18.03.2015)
Schematic UR20 4DI P (Drawing no. 3 54496, issue 5, 27.06.2012)
Schematic UR20 4DO N 2A (Drawing no. 3 60764, issue 1, 12.11.2014)
Schematic UR20 ES (Drawing no. 3 56118, issue 2, 09.11.2012)
Schematic UR20 CTRL Z020 PHY (Drawing no. 3 61002, issue 1, 15.03.2016)
Schematic UR20 PF O (Drawing no. 3 60735, issue 0, 24.10.2014)
Schematic UR20 16AUX FE (Drawing no. 3 60757, issue 0, 03.12.2014)
Schematic UR20 1SSI (Drawing no. 3 60804, issue 0, 27.05.2014)
Schematic UR20 4AI UI 16 (Drawing no. 3 60739, issue 1, 27.10.2014)
Schematic UR20 4AI UI 16 M (Drawing no. 3 65114, issue 2, 31.07.2017)
Schematic UR20 4AO UI 16 M (Drawing no. 3 62650, issue 0, 20.01.2017)
Schematic UR20 4DI P (Drawing no. 3 60758, issue 1, 10.05.2016)
Schematic UR20 4DO P 2A (Drawing no. 3 60725, issue 0, 07.10.2014)
Schematic UR20 ES (Drawing no. 3 56118, issue 2, 09.11.2012)
Schematic UR20 2AI SG 24 DIAG (Drawing no. 3 61240, issue 2, 14.10.2015)
Schematic UR20 3EM 230V AC (Drawing no. 3 60790, issue 4, 31.07.2015)
Schematic UR20 4AI UI 16 DIAG (Drawing no. 3 60742, issue 1, 27.10.2014)
Schematic UR20 4AI UI DIF (Drawing no. 3 61244, issue 2, 24.02.2017)
Schematic UR20 PF I (Drawing no. 3 60734, issue 0, 28.01.2015)
Schematic UR20 PCBA UR20 1COM 232-485-422 (Drawing no. 3 60787, issue 3, 01.09.2015)
Schematic UR20 PCBA UR20 2DI P TS (Drawing no. 3 57790, issue 0, 27.09.2013)
Schematic UR20 PCBA UR20 8DI P HD (Drawing no. 3 55810, issue 0, 13.12.2013)
Schematic UR20 PCBA UR20 4DI P 3W (Drawing no. 3 61250, issue 0, 20.06.2015)
Schematic UR20 PCBA UR20 4DO P (Drawing no. 3 60723, issue 1, 10.10.2012)
Schematic UR20 PCBA UR20 4DI-P (Drawing no. 3 60758, issue 1, 12.12.2014)
Schematic UR20 PCBA UR20 8DO P 2W HD (Drawing no. 3 60813, issue 0, 05.11.2014)
Schematic UR20 PCBA UR20 16DO-N (Drawing no. 360800, issue 2, 02.02.2015)
Schematic UR20 PCBA UR20 FB PB DP (Drawing no. 3 55836, issue 3, 18.03.2013)

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Schematic UR20 PCBA UR20 FB ZYN ETHER (Drawing no. 3 59294, issue 2, 08.08.2016)
Schematic UR20 PCBA UR20 PF FBC GL (Drawing no. 3 62639, issue 3, 05.09.2017)
Schematic UR20 PCBA UR20 CTRL Z010 PHY (Drawing no. 3 62640, issue 1, 08.06.2016)
Schematic UR20 PCBA UR20 FB PN IRT (Drawing no. 3 55805, issue 2, 14.02.2017)
Schematic UR20 PCBA UR20 CTRL ERTEC (Drawing no. 3 60998, issue 1, 16.01.2017)
Drawing no. 3 62318 UR20-FBC-PL (Issue 01 / 31.01.2017)
Drawing no. 3 55131 UR20-FBC-PN-IRT-V2 (Issue 00 / 29.08.2018)
Drawing no. 3 54207 (issue 05 / 08.08.2016)
Software release Process Description Document A393 (Version 1.0 / 27.10.2016)
UR20_Versionfile_20180529
Type Approval Assessment Report Detmold (05.12.2016)
Type Approval Assessment Report Greifswald (13.10.2016)
Type Approval Assessment Report Rattenberg (20.10.2016)
Type Approval Assessment Report Magdeburg (16.04.2018)
Type Approval Assessment Report Magdeburg (2020-06-10)

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2016.
Applicable tests for protected equipment according to IEC 60945, 4th edition (2002)
(Applicaton/Limitation to be observed)

Marking of product

The products to be marked with:

- manufacturer name
- part name / part no.
- serial no
- hardware version.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE